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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,269	02/19/2002	Atsushi Umeda	111987	1061
25944	7590	03/01/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			PHAM, LEDA T	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/076,269	UMEDA, ATSUSHI	
	Examiner	Art Unit	
	Leda T. Pham	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-8,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-8,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/22/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to Amendment filed on 11/17/03.
2. Claims 1, 3, 5 – 8, 10 - 11 are presented for examination.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this claim, “the number of turns is another integer number less than the integer number by one” is confusing. The examiner does not understand the meaning of “the integer number” in the statement. Does it mean any integer number (N)? Therefore, “the number of turns” is less than (N – 1). If so, the comparison between the number of turns and the integer number is useless because there is no specific integer number in the claim to compare the number of turns less than one.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claim 10 is rejected under 35 U.S.C. 102(e) as being anticipated by Fogarty (U.S. Patent No. 6,455,974 B1).

Referring to claim 10, Fogarty teaches a rotary electric machine (figure 1) comprising:
a stator core (14) having a plurality of slots (38);
a multi-phase winding (18) including a plurality of phase windings (20) received in the slots, a number of turns of each of the phase windings in each of the slots being fixed to an integer number; and

a rectifier device connected to the phase windings (inherently, there is a rectifier to connect at the end portions of the phase windings);

wherein the phase windings are connected to one another in a predetermined form of a Y-connection and a Δ -connection to provide an output which is intermediate between two outputs which the rectifier device provides when the phase windings are connected in the Y-connection (figure 9 – 12) and the number of turns in each slot is fixed to the integer number and the number of turns is another integer number less than the integer number by one, wherein each of the phase winding is composed of a plurality of conductor segments (34) in at least two lengths joined together in a same slot.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 5, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al (U.S. Patent No. 6,140,735) in view of Fogarty.

Referring to claim 1, Kato teaches a rotary electric machine (figure 1) comprising a stator core (1) having a plurality of slots (10) and a multi-phase winding (2) including a plurality of phase windings wound in the slots at predetermined angular intervals, wherein the multi-phase winding has a plurality of separate electric conductor segments (201 - 204) connected in series, and each of the slots receives therein generally a same number of the conductor segments, and the electric conductor segments are connected together through respective end portions (23 - 28). However, Kato does not teach one end of one of the phase windings is connected to a middle point other than both ends of another one of the phase windings in a cyclic manner among the phase windings.

Fogarty teaches a rotary electric machine having delta and wye connection winding (figure 7) wherein one end of one of the phase windings is connected to a middle point other than both ends of another one of the phase windings in a cyclic manner among the phase windings (column 6, lines 55 -60) for fine adjustment of voltage level output.

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Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the phase winding connection as taught by Fogarty. Doing so would have a fine adjustment of voltage level output in electric rotary machine.

Referring to claim 5, Kato teaches the rotary electric machine wherein the electric conductor segments each has a rectangular sectional shape (figure 14).

Referring to claim 8, Kato teaches the claim invention except for the added limitation of one end of each of the phase windings is connected to a mid-point of another of the phase windings to form a delta connection of the phase windings.

Fogarty teaches a rotary electric machine having delta and wye connection winding (figure 7) wherein one end of one of the phase windings is connected to a middle point other than both ends of another one of the phase windings in a cyclic manner among the phase windings (column 6, lines 55 –60) for fine adjustment of voltage level output.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the phase winding connection as taught by Fogarty. Doing so would have a fine adjustment of voltage level output in electric rotary machine.

9. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated as applied to claim 1 above, and further in view of Kusase et al (U.S. Patent No 5,122,705).

Referring to claim 3, the combination of Kato and Fogarty ref. teaches the claimed invention, except for the added limitation of the multi-phase winding includes two set of three phase winding.

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Kusase teaches the rotary electric machine wherein the multi-phase winding includes two sets of three-phase windings having a phase difference of $\pi/6$ in an electric angle from each other (column 5, lines 4 – 7) for generating a d.c. rectified output voltage.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the phase winding in the rotary electric machine as taught by Kusase. Doing so would generate a D.C. rectified output voltage.

Referring to claim 7, Kusase teaches the rotary electric machine further comprising a rectifier device (6) for rectifying voltages induced in the multi-phase winding, wherein another end of each of the phase windings is connected to the rectifier device (figure 6).

10. Claims 6, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato and Fogarty as applied to claim 1, 5 above, and further in view of Asao (U.S. Patent No. 6,498,414).

Referring to claim 6, and 11, the combination of Kato and Fogarty ref. teaches the claimed invention, except for the added limitation of the conductors segments in difference lengths.

Asao teaches in his invention the stator having slots with the conductor segments in same slot having difference lengths (figure 10, 45A and 45B) to reduce size of stator core.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the conductor segments with difference lengths as taught by Asao. Doing so would reduce the size of the stator core.

Response to Arguments

11. Applicant's arguments with respect to claim 1- 10 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

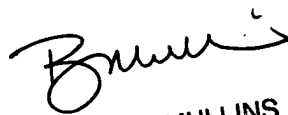
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (571) 272-2032. The examiner can normally be reached on M-F (7:30-5:00) first Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Burton Mullins can be reached on (571) 272-2029. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leda T. Pham
Examiner
Art Unit 2834

LTP
February 5, 2004


BURTON S. MULLINS
PRIMARY EXAMINER